Spent Nuclear Fuel Project

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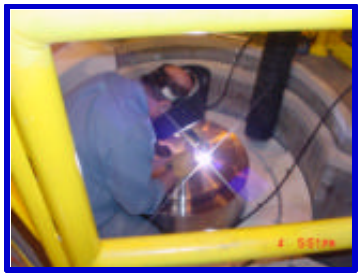
K East Basins - Fuel Transfer System Operations

Canister Storage Building – Multi-Canister Overpack Welding



Sludge Transportation System – Test loading large diameter container into casks at K Basins

K West Basins

Fuel Retrieval System

Canister Cleaner Operations

Loading Cask on Trailer at K West

Cold Vacuum Drying Facility – Multi-Canister Overpack Processing

OVERVIEW

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, *Spent Nuclear Fuel.*

NOTE: Unless otherwise noted, all information contained herein is as of the end of August 2003.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities: The SNF project completed shipment of six multi-canister over packs (MCOs) containing 23.96 metric tons of heavy metal (MTHM) from the K West Basin to the Cold Vacuum Drying Facility during August. As of September 22, 2003, a cumulative total of 264 MCOs containing 1,420.11 MTHM have been shipped.

Fuel Transfer System (FTS): The project completed nine FTS shipments (90 canisters) during August. As of September 22, 2003, a cumulative total of 169 FTS shipments (1,690 canisters) have been completed.

MCO Welding at Canister Storage Building: The project welded and "N" stamped 11 MCOs during August. As of September 22, 2003, the project welded a cumulative total of 80 MCOs and is eight MCOs ahead of schedule.

Sludge Retrieval and Disposition: Effective September 17, 2003, sludge and water system (SWS) activities were reorganized into a single organization reporting directly to FH's President and Chief Executive Officer. This reorganization is a key component of FH's management plan to bring focus on SWS activities:

- **K East SWS:** On September 12, 2003, DOE approved the SWS Design Safety Analysis (DSA) to support construction that documented FH's technical approach for the SWS. The DSA for the SWS will be submitted to RL by September 29, 2003. Approval will be required by October 6, 2003, in order to maintain schedule.

  The project remains on schedule for critical path activities required to declare operational readiness on October 18, 2003. A work-around is in place for the procurement of regulator valves, which are now on the critical path.

- **K West SWS:** During the week of August 25, 2003, the project conducted several working sessions supporting the development of the initial hazards analysis for sludge retrieval, transportation and storage.

  Evaluation of vendor bid packages for the design/build contract was completed. The contract will be placed by October 10, 2003.

  Revisions were drafted to update key technical basis documentation (Revision 10 to HNF-SD-SNF-TI-015, *Spent Nuclear Fuel Project Technical Databook Volume 2, Sludge* and Revision 2 to SNF-7756, *Supporting Basis for Spent Nuclear Fuel Project Sludge Technical Databook*). The revisions have been distributed for technical and peer review.

NOTABLE ACCOMPLISHMENTS, CONTINUED

Deactivation: A contract was awarded to SA Robotics of Loveland, Colorado, to perform a phased underwater concrete hydrolazing demonstration. The first phase of this demonstration was performed September 10, 2003, at the vendor's location. The demonstration showed the hydrolyzing technology was effective in the removal of concrete. The next phase involves testing in the 183 K East Sedimentation Basin to demonstrate effectiveness under field conditions. The final phase will involve decontaminating a portion of the K East Basin wall. DOE Technology Development Funding is supporting demonstration activities.

FH has initiated a formal Risk Assessment of the SNF Deactivation Project schedule using the Fluor Business Risk Management Framework methodology. The purpose of the assessment is to define risks and implement effective mitigation plans, at the earliest possible time, to maximize schedule performance.

FY 2003 SCHEDULE/COST PERFORMANCE ($000)

		Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance $	Schedule Variance %	Cost Variance $	Cost Variance %	Budget At Completion
RL-RS03	**Spent Nuclear Fuel**	141,166	138,253	146,309	-2,913	-2%	-8,056	-6%	156,184

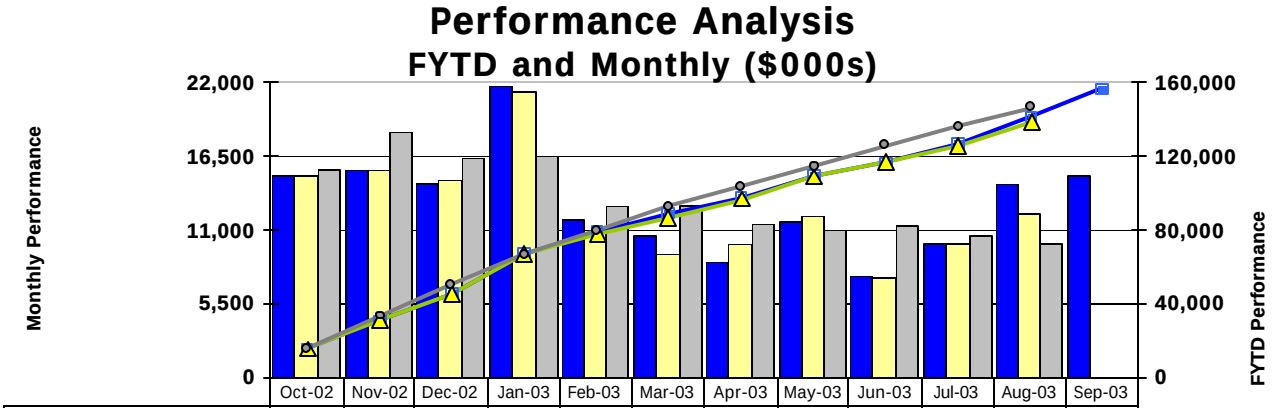
Schedule Variance Analysis (-$2,913K-2%): The unfavorable schedule variance is due to:

- Schedule delays in the FTS shipments from K East to K West;
- Schedule delays in the MCO and canister removal activity in the K West Basin;
- Subcontractor delay in the delivery of MCOs; and
- Delayed start of K East sludge removal.

The MCO shipment schedule will recover with final shipments in September. The K East SWS Operational Readiness Review (ORR) is planned to commence by October 2003. The FTS and MCO delays do not impact the contract or Tri-Party Agreement (TPA) commitment dates.

Cost Variance Analysis (-$8,056K/-6%): The unfavorable cost variance is due to the following:

- Cost increase associated with the design and operational readiness preparation for K East sludge removal;
- Cost increases associated with FTS startup and initial operations;
- Travel cost increases required to assist the MCO contractor with management of third-tier subcontractors;
- Cost increases to support startup/certification of welding contractor; and
- Retention of staff associated with sludge ORR delays.



	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Other WBS Monthly BCWS	15,067	15,433	14,429	21,665	11,785	10,606	8,634	11,666	7,498	9,980	14,403	15,017
Other WBS Monthly BCWP	15,069	15,380	14,763	21,294	10,953	9,220	9,939	11,995	7,466	9,956	12,220	
Other WBS Monthly ACWP	15,580	18,195	16,395	16,425	12,752	12,794	11,413	10,899	11,309	10,562	9,985	
Other WBS FYTD BCWS	15,067	30,501	44,930	66,595	78,380	88,985	97,619	109,285	116,783	126,763	141,166	156,184
Other WBS FYTD BCWP	15,069	30,449	45,212	66,505	77,458	86,678	96,617	108,612	116,078	126,033	138,253	
Other WBS FYTD ACWP	15,580	33,775	50,170	66,595	79,346	92,141	103,554	114,453	125,762	136,323	146,309	

Milestone Achievement

Number	Milestone Title	Type (TPA/ DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-29 (S15-02-001)	Complete K East Basin and K West Basin facility modifications for Alternate Fuel Transfer System casks transportation system	(TPA)	3/31/02	9/12/02		Complete
M-34-12-T01 (S15-02-001)	Complete construction of SWS (Construction Completion Document Section IIA)	TPA	09/30/02	3/4/03		Complete
M-34-17 (S00-02-901)	Initiate K East to K West fuel transfer	TPA/Perfor-mance Incentive (PI)	11/30/02	11/25/02		Complete
M-34-18A (S03-03-068)	Complete removal of 957 MTHM of SNF from the K West Basin	TPA/DNFSB/ PI	12/31/02	1/7/03		Complete
M-34-08 (S04-02-205)	Initiate full scale K East Basin sludge removal	TPA/DNFSB/ PI	12/31/02		11/2003	Target is to declare readiness to commence Contractor ORR by 10/18/03
M-34-27-T01 (S03-03-069)	Complete removal of 1,252 MTHM of SNF from K West Basin	TPA	5/31/03	5/28/03		Completed 5/28/03 3 days ahead of schedule
M-34-28 (S03-03-070)	Complete removal of 1,619 MTHM from the K West Basin	TPA	12/31/03		12/31/03	On schedule
M-34-25-T01 (S03-04-001)	Complete transfer of K East Basin SNF to K West Basin	TPA/PI	5/31/04		5/31/04	Schedule is forecast for completion by 1/31/2004
M-34-18B (S00-00-902)	Complete removal of all K-Basin SNF	TPA/DNFSB/ PI	7/31/04		7/31/04	Schedule is forecast for completion by 5/31/2004

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/ DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
S04-00-205, *CD4*	Complete ORR sludge transfer from K Basins	PI			11/2003	Target is to declare readiness to commence Contractor ORR by 10/18/03
M-34-10 (S04-01-215)	Complete sludge removal from K Basins	TPA/DNFSB/ PI	8/31/04		8/31/04	K East Basin sludge removal planned for completion by 8/31/04. FH submitted a recommended change request for K West SWS to be completed by 6/30/05.
M-34-23 (S10-99-953)	Start K East water removal	TPA	9/30/04		9/30/04	On schedule
S07-04-005	Consolidate spent fuel in the 200 Area	PI	9/30/04		9/30/04	On schedule
M-34-09-T01 (S04-05-516)	Complete K-Basins rack and canister removal	TPA	1/31/05		1/31/05	Potential changes to milestones due to alternate deactivation strategy submitted on 6/30/2003
M-34-24 (S10-99-954)	Complete K East Basin Water removal	TPA	9/30/05		9/30/05	* (see note below)
M-34-22 (S10-99-952)	Complete K West Basin water removal	TPA	8/31/06		8/31/06	* (see note below)
M-34-21-T01 (S10-99-951)	Initiate full-scale K West Basin water removal	TPA	10/31/05		10/31/05	* (see note below)
S06-06-005	Transfer of K-Basins to the River Corridor Contractor	PI	10/30/05		10/30/05	On schedule
M-34-00A (S10-99-955)	Complete removal of K-Basin fuel/sludge/debris/water from K Basins	TPA (Major)	7/31/07		7/31/07	* (see note below)

***NOTE: Milestone may be completed early, if proposed deactivation plan changes are approved.**

FY 2003 FH FUNDS VS. FORECAST ($000)

	Expected Funds	Spend Forecast	Variance
RL-RS03 Spent Nuclear Fuel **Project Completion - Operating**	$ 164,498	$ 160,350	$ 4,148

NOTE: The variance between Expected Funds and the Spend Forecast is attributable to costs resulting from fuel shipment schedule delays, an under-run of planned procurements, and a credit variance distribution for overhead rate adjustments.

ISSUES

Sludge Retrieval and Disposition: The TPA milestone (M-34-08) to begin K East sludge movement by December 31, 2002, is late. Effective September 17, 2003, SWS activities were reorganized into a single organization reporting directly to FH's President and Chief Executive Officer. This reorganization is a key component of FH's plan to bring focus on SWS activities. On September 12, 2003, RL approved the SWS DSA to support construction that documented FH's technical approach for SWS. The DSA for SWS will be submitted to RL by September 29, 2003. Approval will be required by October 6, 2003, in order to maintain schedule. The project remains on schedule for critical path activities required to declare operational readiness on October 18, 2003. A work-around is in place for the procurement of regulator valves, which are now on the critical path.

Fuel Production – FTS Shipments: Removal of all K Basin fuel by July 31, 2004, is based upon the completion of FTS shipments by January 31, 2004. As of September 22, 2003, the project completed 169 FTS shipments (1,690 canisters) and is 30 shipments (300 canisters) behind schedule. Operation of the K East and K West FTS lift tables has degraded since July with multiple limit-switch and alignment problems. Recovery actions are in progress and include the following:

- Assigned a contract engineer with excellent FTS design/installation experience to work with the FTS project team to support system evaluation and repairs. The following system maintenance activities were performed:
  - Leveled both tables;
  - Replaced three of four right-angle drives in K East; and
  - Installed noise monitoring equipment in K East to evaluate the source of noise and vibration in the jackscrews.
- Assembling a small expert team to evaluate alternative methods of transferring fuel from K East to K West that can be used in parallel with, or in lieu of, the FTS. This team will also evaluate alternatives to the MCO Load-out System/Canister Load-out System equipment associated with the MCOs.